



KONKURENTSIAMET  
Estonian Competition Authority



energiavirasto

## Cross-Border Cost Allocation Agreement between the Estonian Competition Authority and Energy Authority of Finland (request accepted)

Pursuant to Regulation (EU) no 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009 (Regulation No 347/2013) the following National Regulatory Authorities (NRAs):

NRA	Country	Contact details
Estonian Competition Authority (ECA), (Konkurentsiamet)	Estonia	Address: 6 Auna Street, 10317 Tallinn Phone: +372 667 2400 Fax: +372 667 2401 E-mail: <a href="mailto:info@konkurentsiamet.ee">info@konkurentsiamet.ee</a>
Energy Authority (Energiavirasto)	Finland	Address: Lintulahdenkuja 4, 00530 Helsinki, Finland Phone: + 358 29 5050 000 Fax: + 358 9 6221 911 E-mail: <a href="mailto:kirjaamo@energiavirasto.fi">kirjaamo@energiavirasto.fi</a>

concerning the project of common interest (PCI) No 8.1.2.2 Paldiski liquefied natural gas (LNG) terminal in the Union wide list of PCI adopted by the European Commission on 18 November 2015, as in the Annex of Regulation (EU) No 347/2013.

Acting in accordance with national legal acts of Estonia (Natural Gas Act in particular) and Finland (Law on Energy Authority in particular) and taking note of Recommendation of the Agency for the Cooperation of Energy Regulators no 05/2015 of 18 December 2015 on good practices for the treatment of the investment requests, including cross border cost allocation requests, for electricity and gas projects of common interest (ACER Recommendation), on 10 August 2016, Estonian, Latvian and Finnish NRAs received an investment request on PCI No 8.1.2.2 submitted by Balti Gaas OÜ (project promoter). The majority shareholder of the company, AS Alexela Invest<sup>1</sup>, is considered the project developer. AS Alexela Invest and Balti Gaas OÜ are members of Alexela Group OÜ.

The project promoter submitted updates to the investment requests based on discussions with the NRAs on 3 October 2016.

<sup>1</sup> Until 31.12.2014 known as Alexela Energia AS

## 1 INVESTMENT REQUEST

### 1.1 Project description

The project promoter has described the Paldiski LNG terminal project in the investment requests, of which following are the extracts:

*The aim of the project is to build and operate the East Baltic Sea regional LNG import and regasification terminal. The project location is on the south coast of the Gulf of Finland, in Estonia. The port location on the north-eastern side of the Pakri peninsula has been chosen for its favourable ice conditions, easy navigational path, low impact on the environment and a large available safety radius. Since the project is planned on the Balticconnector land-fall, connectivity to grid is relatively inexpensive.*

*Balti Gaas OÜ intends to build a Baltic regional terminal with 160 000 m<sup>3</sup> storage tank capacity to be commissioned in the summer of 2021 in order to provide an alternative supply option for the Baltics, who are currently highly dependent on Russian gas imports.*

*The terminal would be large enough to assist with supply to the Finnish market through Balticconnector if necessary.*

#### *Main technical parameters*

- *Storage volume: 160 000 m<sup>3</sup>*
- *Unloading capability: up to 177 000 m<sup>3</sup> vessel*
- *Re-gasification capacity: design flow of approx. 4 Mm<sup>3</sup>/day*
- *Re-loading capacity*
  - *Truck: 2 truck loading bays at 75 m<sup>3</sup> LNG /h*
  - *LNG carriers: up to 75 000 m<sup>3</sup> vessel at up to 5 000 m<sup>3</sup> LNG/h*

*The terminal is designed to service both gas grid customers and off-grid customers, since pursuant to market analysis it is clear that the off-grid market will prove instrumental in this region. The terminal design flow for re-gasification is planned at around 4 Mm<sup>3</sup>/day, with possibility to increase it in case needed. Additionally there is space next to the terminal location for a second tank to be installed if this becomes relevant, with additional re-gasification and loading capabilities for the second tank in such a case. A potential expansion has also been included in the planning and permitting procedure. The expansion to this full capacity will take place on a project by project basis if and when necessary.*

*Similarly truck and LNG carriers loading facilities are developed to support off-grid markets as well as feeder terminals along the coast of the Baltic Sea.*

A detailed technical descriptions of the projects, including descriptions of the rationale behind the choice of the technology, and a map of the planned project are included in the investment requests.

### 1.2 Implementation plan

The project promoter has provided implementation plan of the project providing information about the progress. The following are extracts of these plans:

Project stage	(expected) start date	(expected) end date
Under consideration	1.01.2007	1.11.2007
Planned but not yet permitted	1.11.2007	1.11.2008
Preliminary design studies	1.01.2009	1.04.2013
Market test	1.01.2012	29.01.2016
Preliminary investment decision	31.10.2013	31.10.2013
Public consultation process	26.02.2010	20.05.2015
<b>Permit granting process</b>	<b>14.01.2008</b>	<b>28.10.2016</b>
Financing	17.02.2017	2.06.2017
Cross border cost allocation	1.10.2013	23.09.2016
Exemption from third party access	-	-
<b>Final investment decision</b>	<b>17.02.2017</b>	<b>2.06.2017</b>
Detailed design	1.04.2013	24.04.2014
Tendering	1.11.2011	29.09.2020
Construction	6.11.2017	11.02.2021
<b>Commissioning</b>	<b>4.01.2021</b>	<b>30.06.2021</b>

Although the financing uncertainty in the past has not allowed the project promoter to make the final investment decision (FID). In order to start the expropriation and the construction, financing uncertainties need to be resolved as soon as possible in order to start procurements and to complete the terminal by the beginning of 2021.

The project promoter also presented an assessment of the critical and risk factors for the project and the risk mitigation measures adopted in relation to those factors which could have the most negative impact.

### 1.3 Preliminary investment decision

The project promoter has provided information of 31 October 2013 preliminary investment decision (ref no AEN/2-1/2) and the following is an extract of this information:

*Hereby, Alexela Energia AS, as the 90% shareholder of Paldiski LNG project SPV Balti Gaas OÜ, representing the necessary quorum and qualified majority of any shareholder meeting and decision of Balti Gaas OÜ, affirms a preliminary investment readiness in the Paldiski LNG regional terminal project. Preliminary Investment Decision must be followed by a Final Investment Decision.*

*For a Final Investment Decision necessarily the following list of conditions must be met:*

- *Paldiski LNG is the only regional LNG terminal project on the Union wide PCI list in the Baltic and Finnish region;*
- *Paldiski LNG is granted public funding to at least the extent necessary for commercial viability of the project;*
- *the regulatory framework governing the tariff setting of LNG terminals in Estonia and in the Baltic and Finnish region, is clear, transparent and predictable.*

The above conditions for FID are necessary, but any FID is subject to Alexela Group board approval.

#### 1.4 Permitting process

The project promoter has provided description of the status of the project permitting process in hosting countries, including a detailed schedule and corresponding evidence. The following are the extracts of these plans:

Permitting/Planning stage	Status	Completion date
Location Selection Study	Completed	03.2010
EIA/SEA	Approved	07.2012
General Planning	Approved	09.2012
Detailed Planning	Approved	09.2014
Building Permit		10.2016
Application for operational fitness certificate:		06.2021
- Projects' approvals	After first EPC design phase	Start 10.2017
- Health and safety inspection	During Commissioning	Start 06.2021
- Fire safety inspection	During Commissioning	Start 06.2021

#### 1.5 Project maturity

##### Costs and benefits

The following is an extract of information on costs and benefits provided by the project promoter:

*The business plan is built up on non-binding commitments from clients, since it is too soon to make binding agreements and the Paldiski LNG terminal is not the only LNG terminal in the PCI list in the Baltic region. It is evident that there will be no binding commitments from consumers before the Open Season, and that will take place if and when the final investment decision (FID) is taken. Thus the limitation of non-binding commitments from clients is unlikely to be rectified in terms of this business plan.*

*Secondly, the business plan is compiled before the completion of EPC (Engineering, procurement and construction) tenders. As a result CAPEX (capital expenditure) is given at +/- 15% accuracy and all other costs are given at +/- 30%. After the completion of EPC tendering, the accuracy level will be near complete for all costs. This will realise pursuant to the decision of CEF (Connecting Europe Facility) application. Following such a decision the business plan will be updated. The true cost will be clear at the point of EPC contract signing of course.*

The project promoter has also provided cost breakdown of the project.

##### Permitting

The project promoter has provided information on permitting procedures. The following is an extract of information on permitting by the project promoter:

*The permitting process is not completed, the building permit for the terminal area and some further planning for adjacent projects, such as the jetty structure, are yet to be completed. The permission for jetty structure is expected to be received in Q3 of 2016 and the building permit will be applied for together for the whole project (on-shore and off-shore) after receiving the above mentioned permission. The kind of restrictions that could impose constraints for construction or operating of the terminal would be the result of an EIA (Environmental Impact Assessment), which is already approved in the case of the Paldiski terminal, thus eliminating that risk.*

### Commissioning

The project promoter has presented information on the expected date of the commissioning. The following is an extract of this information:

*Balti Gaas OÜ intends to build a Baltic regional terminal with 160 000 m<sup>3</sup> storage tank capacity to be commissioned in the summer of 2021.*

### Maturity

The project promoter has provided information on the maturity of the projects. The following is an extract of this information:

*All project specific data arises from the latest available information and the business plan accompanying this CBA document. The information may vary somewhat from that in the TYNDP (Ten-Year Network Development Plan) due to the advanced maturity of the project today as compared to the TYNDP data collection period.*

*This analysis and the difference between an early stage CAPEX estimate by a potential EPC contractor and that derived from particular technology specification only available at the FEED (Front End Engineering Design) stage illustrates how important the maturity of a project is to avoid unwelcome surprises in terms of costs at a later stage.*

## **1.6 TSO consultations and regional cooperation**

The project promoter has provided information on TSO consultations (Estonia, Finland and Latvia) and the results of the consultations. Consultation responses from Estonian and Finnish TSOs are provided. No feedback from Latvian TSO.

The Estonian TSO Elering AS was supportive to any new developments in the regional gas market, which improves the situation with supply sources, competition, market development or security of supply. Elering AS considers the Estonian and regional security of supply (SoS) level sufficient (with realisation of planned infrastructure projects Balticconnector, Estonia-Latvia Enhancement and GIPL) not to justify additional SoS investments socialised in TSO tariff. Still, Elering AS is responsible for holding the gas reserve for protected customers, provider of which is chosen in a competitive procurement procedure and is open to all qualifying providers. The Estonian TSO made comments on the CBA assumptions.

The Finnish TSO made comments on the used methodology and assumptions. Finland has already means and is also going to utilize new means of the LNG infrastructure in Finland for SoS purposes. As to a TSO, there is no need to book any capacity for SoS purposes while it is

not the task of TSO in Finland. This means that this request has to be appointed else-where. It can also be noted, that current SoS legislation in Finland limits the possibility of holding alternative fuel stocks abroad.

The project promoter has indicated having considered the comments and, where appropriate, having taken the comments into account and updated the CBA. The project promoter has also provided answers to all the comments from the Estonian and Finnish TSOs (more details on page 16). The response from Latvian TSO was pending at the time of the investment request.

### **1.7 Cost-benefit analysis (CBA)**

The project promoter has presented that the CBA of the projects is based on the ENTSOG methodology of Energy System Wide Cost Benefits Analysis (ESW-CBA). The integrated ESW-CBA methodology is composed of the TYNDP-Step, providing an overall assessment of European gas system under different level of development of infrastructure and the Project-Specific Step, providing an individual assessment of project impact on the European gas system based on common dataset defined through the Ten-Year Network Development Plan step (TYNDP-Step) and project specific data.

The assessment of the project is carried out on the years  $n$ ,  $n+5$ ,  $n+10$ ,  $n+15$  and  $n+20$  ( $n$  being the year of analysis), therefore, the period is covering years 2016, 2021, 2025, 2030 and 2035. In calculations of the Economic and Financial Performance Indicators, the extended time horizon is used. This covers the period from the year of the analysis until the 20th full year of operations. In the ESW-CBA three gas demand scenarios are modelled: Grey and Green.

The project promoter has stated that there is still uncertainty about potential regional gas market development, but the CBA has been developed to reflect most realistic assumptions for quantification of benefits from Paldiski LNG terminal project.

### **1.8 Financial analysis**

Financial analysis results indicate that the Paldiski LNG terminal is not financially or commercially feasible on purely commercial terms, as the tariff levels would be at an unsustainable level for successful operation of the terminal. For commercial feasibility at least some public funding would be required.

If it receives a public grant of the amount of 40% of eligible CAPEX and the regulatory framework governing the tariff setting is clear and incentivising, the project would become feasible both financially and commercially.

Table 1 presents the public funding impact provided by the project promoter at different levels of EU funding (Grant).

**Table 1. Grant effects on tariffs**

Grant level	Tariff level, €/MWh					Project		Equity	
	% of CAPEX	2021	2025	2030	2035	Beyond	NPV, M€	IRR, %	NPV, M€
0%	17,8	3,7	2,8	2,3	2,2	10,51	8%	-20,84	8%
10%	16,2	3,4	2,5	2,2	2,1	17,99	8%	-15,55	9%
20%	14,6	3,1	2,3	2,0	1,9	25,47	9%	-10,29	11%
30%	13,0	2,8	2,1	1,8	1,8	32,92	9%	-5,05	12%
40%	11,3	2,4	1,9	1,7	1,6	40,34	10%	0,15	14%
50%	9,7	2,1	1,7	1,5	1,5	47,71	11%	5,31	16%
60%	8,1	1,8	1,5	1,3	1,3	55,02	12%	10,43	19%
70%	6,5	1,5	1,2	1,2	1,1	62,25	13%	15,52	22%
80%	4,9	1,2	1,0	1,0	1,0	69,35	16%	20,53	27%
90%	3,3	0,9	0,8	0,8	0,8	76,25	21%	25,5	34%
100%	1,7	0,6	0,6	0,7	0,7	82,78	34%	30,41	44%

If the NPV (Net Present Value) on equity is not above zero, no private capital would be attracted to the terminal project. For this grant level calculation a RoE (Return on Equity) of 14% is assumed based on realised RoE of the developer in regular business activities.

#### Market test results

The project promoter has provided information on the results of a market test.

In Estonia, Balti Gaas OÜ has approached larger consumers in person:

- AS Nitrofert (215 Mm<sup>3</sup>/year) is the largest gas consumer in Estonia when operational. They have replied to our inquiry that their supply choice is purely driven by price.

- AS Alexela Energia is the oldest gas company in Estonia and the market leader in LPG sales. They have also a market share of 4% in the natural gas market in Estonia. They are ready to make a long-term commitment.

- Tallinna Küte AS and Eraküte AS (143 Mm<sup>3</sup>/year) is part of the largest heating plant group recently bought by Estonian investors from Dalkia Group. They have shown interest and given us their potential demand quantities in writing. Their interest in LNG would be the possibility to attain fixed price contracts. Since their main business is district heating, their end user price is regulated. The fixed heating price level is set once a year, but currently the pipe gas contracts are not capable of offering annual fixed price contracts to large customers. Negotiations with Tallinna Küte are on-going and they are doing the calculations on the effect of a fixed LNG price on the end-user price. The effect is thought to be limited since the current gas price volatility is calculated into the sales margin. A fixed gas price would reduce the need for the risk buffer in the sales margin. For booking commitment see below.

- Alexela Group (14 Mm<sup>3</sup>/year) is the parent group of Balti Gaas OÜ. Alexela Group companies currently have the abovementioned gas demand. However, in Paldiski, near the terminal

location it has further potential gas demand of up to 20 Mm<sup>3</sup>/year. This further potential is not included in the business plan, but can be considered as a potential up-side in the future.

- Paldiski city (new gas consumption) is adjacent to the terminal and could thus receive gas connectivity. According to research, there is further potential (excluding the aforementioned Alexela companies) for 11 Mm<sup>3</sup>/year in terms of gas demand. However, none of these potential clients would take a commitment at this early stage. All are subject to economic feasibility of converting from current energy sources. None of this additional demand is included in the model, but can be considered as a potential up-side.

- VKG AS (new gas consumer) does not currently consume gas, but is planning a shale oil refinery. This refinery would be a substantial consumer of gas, equal in magnitude to AS Nitrofert. However, currently the plans are on hold and thus VKG is not willing to make any statements of commitments at this time. However, a refinery in Estonia is likely, either by VKG AS alone or a joint venture with the state owned Eesti Energia AS and this is potentially an enormous consumer of LNG if suitable terms are provided.

- Keila city and municipality (new gas consumption) potential gas demand is estimated to be 30 Mm<sup>3</sup>/year. However, this is only a potential demand and not directly linked to the terminal realisation, but rather the Balticconnector realisation. This can be considered as a potential up-side to the business model, but not considered in the current business plan.

- Data Valley Estonia (226 Mm<sup>3</sup>/year) is a data centre project on Pakri peninsula which would require LNG for security of supply. This project is still in the planning stages and therefore the quantities are not included in this business plan, but must be considered as a large potential up-side for the project.

In Latvia Alexela Invest has approached a few large clients and Inčukalns UGS for indications for cooperation:

- Latvenergo (500 Mm<sup>3</sup>/yr.) has been approached to discuss potential demand, terms and conditions and pricing structure. Latvenergo runs two large cogeneration plants in Riga, which use natural gas as their main fuel. Latvenergo would understandably be a very attractive long-term client for the terminal. The process of approaching Latvenergo is on-going.

- Latvijas Propana Gaze (currently LPG) is the market leader in LPG trading in Latvia. Propana Gaze provides local gas distribution for towns and cities using LPG and distributing it from an underground storage tank in a closed distribution network to households. One of their largest such LPG distribution is in Ventspils. This is a potential market where the less expensive LNG could replace LPG as the more efficient fuel for heating purposes. Additionally Propana Gaze operates LPG filling station network and provide customized heat solutions for industrial clients, for example, agriculture and transit industries. Propana Gaze has been considering LNG procurement before and expects that there is a market for this fuel in Latvia.

- Latvijas Gaze is the operator of the Inčukalns UGS and thus a potential strategic partner for the LSO as well as a potential supply security or peak shaving client. Thus far cooperation has been limited and Latvijas Gaze has indicated an unwillingness to enter into any agreements before the status of their operating license, due to expire in 2017, is clarified.

In Finland the developer has approached the Finnish TSO in order to ascertain any information on security of supply booking in a regional terminal in Paldiski. The Finnish TSO has replied,



indicating that the state has imposed a restriction on storing security of supply reserves abroad. Only 30% of all needed reserve fuel is allowed to be stored abroad.

- Haminan Energia Oy has additionally signed a letter of interest to procure 1,4 TWh of LNG through the Paldiski terminal for their planned Hamina LNG small-scale terminal.

The overall sentiment in the market, which was encountered during this direct approach method, has been either cautiously enthusiastic or merely accommodating. There have been no definitive rejections, but it is clear that a lot more work must be done in informing the potential market of the possibilities that LNG can offer as well as reassuring them of the reality of the terminal realising in the Baltic region.

### Revenues

The project promoter has provided the planned NPV revenue by years. Table 2 presents the planned revenue of the project on period 2016-2036.

**Table 2. Paldiski LNG terminal revenue**

Source (M€)	Project's NPV revenue	2021	2025	2030	2035
Security of Supply bookings	33	1,4	3,5	3,1	2,8
Long term bookings	202	24,3	18,8	14,5	12,4
Short term bookings	47	1,6	3,4	5,3	5,6
Re-gas fees	28	0,6	1,7	3,1	4,2
Loading fees	2	0,1	0,2	0,2	0,2
<b>Total revenue</b>	<b>311</b>	<b>27,9</b>	<b>27,5</b>	<b>26,1</b>	<b>25,1</b>

### Costs

The project promoter has provided the cost components and the planned investment years. Table 3 presents the NPV of total investment costs of the project.

**Table 3. Paldiski LNG terminal investment costs**

NPV (M€)	Estonia	Latvia	Finland	Total
Investment CAPEX	305,3	0,0	0,0	305
Operating costs	99,3	0,0	0,0	99
<b>Total cost</b>	<b>404,6</b>	<b>0,0</b>	<b>0,0</b>	<b>405</b>

## **1.9 Economic analysis**

The project promoter has provided economic performance indicators. The indicators are calculated from identified and monetised benefits and costs. For discounting the social discount rate of 4% has been applied.

The project promoter has used the same assumptions for the cost as for Financial Performance Indicators.

The project promoter has monetised the following benefits:

- saved cost of gas;
- security of supply;
- CO<sub>2</sub> emission reduction;
- residual value;

The project promoter has presented that for the **saved cost of gas of grid consumers** benefit historical price differences have been analysed. The direct benefit from diversification to the consumers is that the alternative sources of supply can offer lower price than from current source, therefore creating savings for the consumers against the do-nothing scenario. The project diversifies supply sources and counterparties for the **off-grid consumers** (consumers in heating and transportation sector) as well, introducing new and affordable source of fuel for the off-grid consumers. In contrast to grid consumers who can source re-gasified LNG with no extra costs, off-grid consumers are required to make additional capital expenditure and operating expenses to introduce and maintain the equipment associated with LNG.

The project contributes positively for the consumers of natural gas by introducing additional independent supply source, therefore increasing the **security of gas supplies** and reducing the potential disruptions in gas supplies for technical, economic or political reasons. The direct quantifiable benefit from security of supply to the national economy is the avoided cost of gas supply disruptions against the do-nothing scenario. Avoided costs are represented by the avoided reduction of gross domestic product (GDP) due to disruption. Considering that absolute majority of economic output requires energy input of any kind, the share of natural gas in primary energy balance is used as the indicator of the effect of natural gas on the economy (GDP).

The assumed fuel switching for off-grid consumers caused by the project directly impacts the sustainability of the impacted countries by **reducing the CO<sub>2</sub> emissions**, as the emission level from natural gas are lower than liquid fuels currently used by the off-grid consumers.

As the lifetime of LNG terminal is longer than the calculation timeframe – 30 years, the **residual value** of the terminal investment can be considered as benefit for the society. The residual value is estimated using the abovementioned economic lifetime of the terminal.

The project promoter has presented costs and benefits for Estonia, Finland and Latvia and national net impacts when considering the above mentioned costs and benefits as well as the expected revenues related to capacity bookings. Table 4 presents the national net impacts as provided by the project promoter.

**Table 4. National net impacts**

Country	ENPV	Revenues from capacity bookings	National net impacts	Share
	M€	M€	M€	%
Estonia	71,6	281,6	353,2	56,8%
Finland	239,6	0,0	239,6	38,6%
Latvia	28,6	0,0	28,6	4,6%
<b>Total</b>	<b>339,8</b>	<b>281,6</b>	<b>621,4</b>	<b>100,0%</b>

### Sensitivity analysis

The project promoter has presented a sensitivity analysis for the economic performance indicators. The most significant impact comes from saved cost of grid gas, saved cost of bunker fuel and saved cost of security of supply. Variables affecting these three indicators in particular are further analyzed in the sensitivity analysis. Some of these variables will also affect other indicators.

- Saved cost of grid gas is affected by grid demand, LNG prices and oil indexed product prices.
- Saved cost of bunkering is affected by bunkering demand, LNG prices and oil indexed product prices.
- Security of Supply benefits are affected by GDP growth scenarios and energy mix variations.

On top of these variables, project specific variables are analyzed, such as CAPEX, OPEX and commissioning date as well as the effect of other infrastructure project delays on the ENPV of the Paldiski LNG project.

#### **1.10 Qualitative analysis**

The project promoter has presented a qualitative analysis of benefits that could not be monetised with sufficient certainty. These benefits include landscape improvement, political and market bargaining power, increased regional activity and peak electricity price reduction.

The direct qualitative cost of the terminal is the noise and traffic pollution of the surrounding areas during construction and operation of the terminal, landscape intrusion and occupation of land.

While there are some potential additional cost risks especially during construction and operation period, but the qualitative analysis indicated that the benefits are expected to outweigh the costs. There are benefits to improving the investment climate by improving reliability of energy availability, inducing economic activity, providing new industry potential with an alternative energy carrier and allowing political security to the region by relieving external influences on the region's security.

#### **1.11 Business plan**

LNG supplies are moving away from long-term contracts and becoming more flexible. The potential of supplies from North America significantly increases the attractiveness of LNG as an alternative source of gas in the Baltic and Finnish region. It is however clear that the potential of the terminal to receive standard LNG tankers of 150 000 m<sup>3</sup> of LNG and higher is of paramount importance for LNG to be competitive in the region.

The markets of the Baltic States are in a more imminent need of supply diversification as some of their supply contracts have expired and some due to expire in the near term and the negotiations for new contracts are ongoing. In order to offer bargaining power for the Baltics, significant progress must be made on import capability.

There is a large off-grid market potential, most notably in transport (both on shore and off-shore). This is a market where a lot of the environmental targets of the EU can be bridged by gas for the near future.

### **1.12 Financing strategy**

The terminal is not viewed to be commercially viable in its current scope without an external grant, be it national or European.

From market testing it became clear to project promoter that the terminal can only operate competitively in case it's terminal tariff lies below 2,98 €/MWh.

The project promoter has concluded that 40% public grant is necessary for the terminal tariff level to be competitive in the markets available to this LNG terminal, for the return on equity to be attractive for investors and for the risks to be mitigated sufficiently for the commercial financing.

### **1.13 Cross-border cost allocation (CBCA) proposal**

As per Regulation (EC) 347/2013 Article 12 3(c) the project promoter may submit a substantiated proposal for a Cross-Border Cost Allocation. According to the said Regulation the national regulatory authorities shall, after consulting the project promoters concerned, take coordinated decisions on the allocation of investment costs to be borne by each system operator for the project, as well as their inclusion in tariffs. The national regulatory authorities may decide to allocate only part of the costs, or may decide to allocate costs among a package of several projects of common interest.

The substantiated CBCA proposal takes into account the net costs of the host country and the net benefits of each analysed country. The countries exhibiting net benefits which exceed 10% of total regional net benefits, will contribute towards alleviating the net cost in the host country. In case no country exhibits net costs, no cost allocation is required.

Table 5 presents the compensations to be provided by net beneficiaries to net cost bearers.

**Table 5. Compensations to be provided by net beneficiaries to net cost bearers**

<b>Country</b>	<b>Net benefit</b>	<b>Benefit over 10%</b>	<b>Value of financial revenues</b>	<b>Compensation after financial revenues</b>	<b>Cross-border cost allocation</b>
	<b>M€</b>	<b>M€</b>	<b>M€</b>	<b>M€</b>	<b>M€</b>
Estonia	71,6	37,6	311,2	0,0	0,0
Finland	239,6	205,6	0,0	0,0	0,0
Latvia	28,6	0,0	0,0	0,0	0,0

From Table 5 it is clear that the net benefit to each country is positive and therefore there is no need for Cross Border Cost Allocation from the significantly impacted countries to the host country as per ACER recommendations.

## **2 ASSESSMENT OF THE INVESTMENT REQUESTS**

The investment requests were submitted on 10 August 2016 and update on 3 October 2016 to all the NRAs concerned pursuant to Article 12(3) of Regulation 347/2013. The concerned NRAs were firstly established by the project promoters by submitting the investment requests to the Finnish, Estonian and Latvian NRAs i.e. the project promoters foresee that these Member States could have a significant net positive impact from the project.

After reviewing and assessing the investment requests as presented in the following, the concerned NRAs do not consider justified to consider Latvia as potential country to allocate costs due to very small share of Latvian benefit in total net benefit.

### **2.1 Admissibility**

The concerned NRAs find that all required documents as per Article 12(3) of Regulation 347/2013, namely a project-specific cost-benefit analysis (CBA), a business plan including the results of market testing are presented and complete. The investment requests also include a substantiated proposal for cross-border cost allocation (CBCA) as agreed by the project promoter.

Article 12(3) of Regulation 347/2013 contains two admissibility criteria, which project promoters need to meet for submitting a valid investment request and which require assessment by the NRAs: (i) a prior consultation of the TSOs from the Member States to which the project provides a significant net positive impact; and (ii) the project having reached sufficient maturity.

### **2.2 Evidence on TSO consultations**

The Finnish, Estonian and Latvian TSOs have been analysing in cooperation the technical impacts of the developed infrastructure in the region. Based on evidence provided by the project promoter, namely the consultation documentation sent to the Finnish, Latvian and Estonian TSOs and the responses received from the Finnish and Estonian TSOs as well as based on further concrete information on cooperation regarding the infrastructure development and market integration in the region provided by the project promoter, the concerned NRAs find that the project promoter has consulted the concerned TSOs in line with Article 12(3) of Regulation (EU) No 347/2013.

### **2.3 Maturity**

The concerned NRAs have considered the maturity of the projects pursuant to the ACER Recommendation, namely in terms of:

- a) sufficient certainty about the costs assessed by the project-specific CBA
- b) good knowledge of the factors affecting expected costs and their ranges
- c) a cost uncertainty range

- d) reasonable foresight of the benefits assessed by the project-specific CBA
- e) reasonable knowledge of factors affecting benefits and their ranges, also with regard to different scenarios and sensitivity analyses
- f) permitting procedures having started in all hosting countries
- g) commissioning to be achieved indicatively within 60 months from the date of submission of the investment request

The concerned NRAs find that the investment requests demonstrate sufficient certainty about the costs and good knowledge of the factors affecting expected costs as well as presents a cost uncertainty range.

The concerned NRAs find in their assessment of the project-specific CBA that the CBA demonstrates reasonable foresight of the benefits and that there is reasonable knowledge of factors affecting benefits and their ranges, also with regard to different scenarios and sensitivity analyses.

The concerned NRAs find that the permitting has started and partly completed and that expected commissioning of the project on summer 2021 is realistic.

Thus, the NRAs conclude that the project has reached sufficient maturity for NRA decision.

#### **2.4 Completeness of the investment request**

The concerned NRAs have assessed the completeness of the investment request while taking particular note on the ACER Recommendation. The Agency has recommended that an investment request submitted by project promoters should provide the following information and, where appropriate, supporting evidence:

1. a detailed technical description of the project;
2. a detailed implementation plan of the project
3. a preliminary investment decision on the investment(s), if applicable;
4. a short description of the status of the project permitting process in all hosting countries;
5. information about the sufficient maturity of the project;
6. information on TSO consultations and the results of the consultations;
7. a project-specific CBA;
8. a business plan including a description of the chosen financial solution;
9. a substantiated proposal for cross-border cost allocation (if agreed by the project promoters).

The concerned NRAs find that the investment requests are complete and include all the above mentioned information and, where appropriate, supporting evidence.

#### **2.5 Assessment of CBA**

##### **The basis of concerned NRAs' assessment of CBA**

The concerned NRAs have assessed the project-specific CBA while taking particular note on the ACER Recommendation. In order to be basis for proper cross-border allocation decision, the CBA needs to be comprehensive and comprehensible, and use comparable and monetised

information on costs and benefits and other cross-border monetary flows, disaggregated per country. It is of utmost importance that input, assumptions etc. used to derive the CBA of a project for different purposes (i.e. TYNDP, PCI selection, TSO consultation, investment request) are identical unless there exists a reasoned justification.

The project-specific CBA (submitted by the project promoter to TSOs during the TSO consultation, as well as submitted to NRAs as part of an investment request) needs to comply with principles laid down in Annex V of Regulation No 347/2013 and be consistent with the rules and indicators set out in its Annex IV. In addition, the Agency recommends that the project-specific CBA should comprise the following:

- a) information on input data and assumptions;
- b) details underlying cost estimations;
- c) details underlying benefit determination;
- d) details underlying estimations of other cross-border monetary flows;
- e) detailed calculations in spreadsheet format (for calculation of national net impacts);
- f) summary of results (disaggregated by country)
- g) sensitivity analysis

Projects may be considered complementary if the aggregated benefits of a joint development of the relevant PCIs are higher than the sum of projects' benefits estimated on a stand-alone basis for each project.

The Agency has recommended that the benefit results per country for the various ENTSOG's TYNDP scenarios are provided in all investment requests. The project promoters may also provide additional scenarios, which they deem plausible, and the associated results.

The Agency has recommended that at least the following categories of benefits are monetised and separately presented per country, including the methodology used for valuations and the underlying assumptions:

- a) market integration;
- b) competition;
- c) security of supply;
- d) sustainability.

Annex V(1) on Regulation No 347/2013 defines the "n+20" time horizon of the input and output data on a 5 year basis. Within CBA, a standardised social discount rate (4% real) should be used for the calculation of discounted national net impacts.

#### General assessment of CBA

The concerned NRAs find that the project-specific CBA demonstrates the above mentioned expectations to be considered as basis for proper cross-border allocation decision. The provided CBA shows continuity in respect of different purposes of a CBA from TYNDP to investment request and complies with the requirements and principles of the Regulation No 347/2013. Specifically, the CBA comprises of information on input data and assumptions, details of costs and benefits and detailed spreadsheet calculations of there as well as summary of disaggregated results and sensitivity analysis.

The CBA results are provided in ENTSOG's Green and Grey scenarios prepared by the project promoter.

The concerned NRAs find that the above mentioned categories of benefits, namely market integration, competition, security of supply and sustainability, are monetised and separately presented per country, including the methodology used for valuations and the underlying assumptions.

The concerned NRAs find that the CBA is consistent with the Regulation No 347/2013 in terms of time horizon of the input and output data on a 5 year basis. Also, the concerned NRAs find that the recommended standardised social discount rate is used by the project promoter in the CBA.

#### Detailed assessment of the assumptions in CBA

The concerned NRAs have assessed the assumptions used in the CBA while considering the comments made by the TSOs in the region as well as views presented by the project promoter in addition to the explanation presented in the investment request.

The views of the Finnish TSO (Gasum OY) to the CBA:

The Finnish TSO states in its consultation response to project promoter on 5 April 2016 comments to the CBA methodology and assumptions, which are referred in the following:

##### 1. Volume scenarios, gas consumption in Finland

- The ENTSOG Green and Grey scenarios are outdated and are based on the information of 2013 and were collected by ENTSOG on 2014. The situation in the gas market in Finland has remarkably changed since 2013 and therefore these ENTSOG scenarios should not be used in analysis.
- It seems that in the calculation of benefits majority of them come from off grid use of LNG, but it is unclear what the volumes in the off-grid market are and how they are obtained.

##### 2. Impact on Finland from the Paldiski LNG terminal

- Finnish TSO don't see any significant impact of the Paldiski LNG terminal on Finland, even in case the Balticconnector would be built.

##### 3. Inaccuracies and misinterpretations in the CBA

- The grid injection capacity (4 Mm<sup>3</sup>/day) of the LNG terminal is not in line with the characteristics of connected pipeline infrastructure (Balticconnector is planned to be 7,2 Mm<sup>3</sup>/day). The grid injection capacity is of importance also in relation to the calculation of SoS benefits.
- There is no requirement at a regional level for N-1 criteria in the existing legislation as the CBA refers. Instead, national N-1 criteria needs to be fulfilled.
- The CBA assumes expiration of the gas supply contract between Finland and Russia in 2025. The gas supply agreement between Finland and Russia has been renegotiated and its duration has been extended.
- In the CBA it is mentioned in some points that Gasum or Finnish TSO is the promoter of the Balticconnector project. This information is outdated as the project was transferred from Gasum OY to Baltic Connector OY in the end of 2015.



- There are some discrepancies in indication capacities units and values in the CBA.

#### 4. Quantitative analysis of impact

- The analysis assumes that LNG will be the cheapest alternative but so far the history has not shown a case, where LNG would be cheaper than the gas supplied via pipeline from Russia. Missing under this evaluation is also the fact that price convergence can cause prices to increase in Finland, which would be the case in integration of markets of Finland and the Baltics.
- The evaluation of fulfilment of the N-1 criteria by using ENTSOG's green and grey scenarios are not relevant. Currently the gas peak consumption is not foreseen to be any higher in the future than all-time high in 2010 as customers have invested in replacing gas with biofuels, waste and other renewable energy sources, which has been the target of the EU and Finnish government energy and tax policy. The current infrastructure is sufficient to cover this demand and the N-1 criteria will be fulfilled without any further investments.

#### 5. Monetized analysis

- The analysis uses listed general premises in the CBA and some of those are not in line with the current situation (Balticconnector fees, share of natural gas in primary energy balance, reduction of disruption probability jointly with Balticconnector).
- The assumption that LNG will be cheaper alternative constantly until 2035 cannot be justified. Taking into account the low amount of supplied regasified LNG, it may be possible in short term but as a general assumption of having lower LNG prices in long term cannot be used in the CBA.
- The saved cost of fuel of off-grid consumers and more specifically bunkering customers assume that 50% of the total terminal bunkering demand in the Baltic Sea waters would be served from the Paldiski LNG terminal. The assumption of the benefits can be argued because there are already several other LNG terminal projects either existing or under construction in the Baltic Sea area. It is highly doubtful that the new market entrant would gain that high market share.

#### 6. Security of supply

- The promoter has indicated security of supply benefits as one of the largest benefits of the project. In this relation Finnish TSO would like to highlight following:
  - the analysis does not take into account the fact, that biogas production and injection to the transmission grid in Finland covers already the full need of the protected customers and there is no additional need for that segment.
  - LNG terminal infrastructure is already under construction in Finland and will be in operation prior the Paldiski LNG terminal. Those terminals in Finland will also serve as a back-up for the grid gas supply reducing the need of any other security of supply services.
  - The obligation to have the SoS capacity is not assigned to the TSO in Finland. According to the Finnish legislation, the obligation is of the importer of gas or the final user of gas and according to the EU legislation, it is the responsibility

of gas undertakings. TSO is responsible to guarantee its own infrastructure's capacity sufficiency, not to provide other means of gas supply.

- Data related to the market share of gas is outdated while it refers to the 2013 report. Recent changes in energy policy and in energy market in general have been remarkable and this information has to be updated.
- The approach of the analysis compares the situation to do-nothing situation which is not further explained. Gasum thinks that there is no do-nothing scenario and as an example of actions how Gasum is acting towards improving SoS, they would like to mention the biogas injection to the gas grid, which already now covers all needs of the protected customers. Furthermore, Gasum is active in building a solution where LNG can be supplied from off-grid terminals to the grid by using already existing infrastructure thus needing minimal further investments.
- The value of this interruption is based on gas' share in the energy mix and total GDP in Finland. The approach does not take into account what is the share of gas in the generation of the GDP. Additionally, approach assumes that there are no other alternatives for the Finnish gas use in case of gas supply disruption. This is not the case, most of the gas customers in Finland are obliged to hold alternative fuel stocks. Taking above into account, the calculated disruption cost is not appropriate.
- In the approach presented in the CBA, Finnish TSO doubts that the injection capacity of 4 Mm<sup>3</sup>/day would be sufficient to supply the gas amount based on the SoS benefit calculation.
- The CBA overall evaluation of security of supply situation in Finland is not in line with EU commission communication (COM(2014) 654 final)<sup>2</sup>.

As indicated above, Finnish TSO considers the approach in the CBA for saved costs of gas, saved costs of fuel and security of supply benefits unacceptable and expects project promoter to reanalyse those.

The views presented by the project promoter to Finnish TSO consultation letter:

The CBCA document was compiled using the latest methodology provided by ENTSOG and recommendation issued by ACER. ACER recommendation document (No 05/2015 of 18 December 2015) states that the project-specific CBA should be based on the ENTSOG scenarios used in the last TYNDP.

Taking into account Finnish TSO's consultation results, project promoter explains and has made following adjustments in the CBA:

1. In the CBA and Business Plan project promoter has used the low scenario as the new negative scenario for Finland.
2. The project promoter disagrees with Finnish TSO's opinion in regards of Paldiski LNG terminal not having a significant impact to Finland for the following reasons:

<sup>2</sup> Commission communication (COM(2014) 654 final):

[http://ec.europa.eu/energy/sites/ener/files/documents/2014\\_stresstests\\_com\\_en.pdf](http://ec.europa.eu/energy/sites/ener/files/documents/2014_stresstests_com_en.pdf)

- Paldiski LNG terminal is in the second list of Projects of Common Interest, which was adopted using the ENTSOG evaluation methodology. Therefore being in the adopted list expresses the significant cross-border impact of the project according to the European Commission.
  - The research done by Frontier Economics “Baltic regional gas market study” from April 2016<sup>3</sup>, clearly stated, that Estonian LNG terminal in certain cases (LNG being cheap) would reduce congestion and enhance security of supply in the region, hence having a significant impact on the region and more specifically to Estonia and Finland.
3. In terms of inaccuracies noted in consultation letter, project promoter has made some amendments:
- Project promoter has updated the tables of existing and PCI infrastructure and added also the GWh/day values.
  - In terms of wording of the N-1 rule, it refers to the results of the research paper and the idea of the conclusion is, that the realization of certain PCI infrastructure would help the single countries of the region to fulfill the N-1 rule, not the region as a whole. The need to fulfill the N-1 rule on regional basis might be the case in light of the recent developments of moving towards a single entry-exit zone in region.
  - As for the supply contract between Russia and Finland, the fact is that our best knowledge is a supply agreement ending in 2025 and no public information regarding the change of the agreement has been published or provided to us. Project promoter would welcome any additional data Finnish TSO can provide in terms of the new supply agreement, be it in terms of the length of the contract or pricing formula to improve the CBA.
  - As for the inaccuracies of the quantitative analysis, project promoter would like to emphasize again that results are provided by ENTSOG and calculated using the latest CBA methodology. In the quantitative analysis, the price configuration of LNG being cheap and Russian gas being expensive are the proposed scenarios by the European Commission to the BEMIP region. This is the reason, why more emphasis is put on this configuration.
  - Project promoter agrees that the price convergence can happen in both direction, but due to the nature of ENTSOG methodology, where a source (Russian gas, LNG) is considered equal for all countries, it does not show the impact to the full extent.
  - In regards to the disrupted quantity indicators, project promoter would like to state again, that the CBA should be based on ENTSOG’s scenarios.
4. Project promoter has asked for the update of Balticconnector fees from Estonian TSO and they have provided the new information which was used in the updated CBA calculations.
5. The share of natural gas in primary energy balance is taken from the latest report by European Commission and no newer data can be found from a trustworthy source.

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<sup>3</sup> <http://gaas.elering.ee/wp-content/uploads/2016/04/Baltic-gas-market-study-2016.pdf>

6. In regards to the comments received to the calculations of the benefits to the security of supply, project promoter has corrected the value of the reduction of the probability of a supply disruption.
7. The project promoter explains, that the expressed LNG price is realistic and the comparison to current grid gas prices shows the most accurate result in terms of the data available:
  - The project promoter uses Henry Hub prices as the base for the calculation with prices quoted in energy units. The future price for LNG in Henry Hub as well as oil prices are taken from the latest EIA forecast. The LNG conversation costs and transportation costs are indications by several different LNG traders and evaluated as being on the higher end in order to be conservative. The pricing used in calculations is actual supply contract offers from traders, which would be attainable at the Paldiski LNG terminal.
  - The comparison between the price paid by different consumers in different countries is based on data provided by statistics departments of the relevant countries and is quoted in energy units.
8. The bunkering projections done by Bomin Linde includes vessels using Tallinn, Helsinki and Hanko ports. They have estimated the LNG share of total fuel used in 2020 is 7% increasing to 19% by 2025. This would mean that Paldiski LNG terminal would only provide fuel for less than 10% of the vessels using the above mentioned ports. The project promoter is the provider of the infrastructure and the exact business plan and market share is dependent on the bunkering company. The CBA used the estimates provided by the bunkering partner of the Paldiski LNG terminal.
9. In regards to the off-grid and on-grid division of benefits and their inclusion to the CBA, project promoter would like to note that removing the costs and benefits of off-grid market would result in the ENPV of the project being still above zero indicating a net positive project. The grid market is more price sensitive market and the revenues received from the off-grid markets will help to minimize the possible need for a cost allocation or a possible grant size of the project.
10. The project promoter has doubt in the fact that currently the biogas production in Finland covers the full need of the protected customers. However, the project promoter has taken note, that the need for SoS storage to be provided to protected customers might fall, depending on the increased production of biogas. Currently the project promoter has used indication from the last consultation letter of potential interest for about 5000 m<sup>3</sup> of LNG, which is dependent on the changes to the national legislation. In addition, the project promoter would like to mention that the bearer of the obligation to keep the SoS reserves does not change the total need for SoS capacity.
11. For the LNG infrastructure being built in Finland, the project promoter would like to receive any information in regards to the terminals being built and their influence to Finnish grid capacities, as the current data from TYNDP 2015 shows only Finnigulf and Tornio ManGa terminal information and as the first one was cancelled and the latter is not connected to the grid.
12. The data regarding the share of gas in the primary energy mix were provided by a trustworthy source as European Commission and that can be considered as one and no newer data is available from the public sources. Additionally the project promoter would

like to note, that in CBA they have run a sensitivity analysis to show the effect of lower share of natural gas in the energy mix.

13. In regards to the comments received to the calculations of supply disruptions being calculated against a do-nothing scenario, in the project promoter's opinion the best and cheapest solution is in case of a supply disruption to replace it with natural gas from another source. The project promoter has considered the consultation letter comments and changed some principals for calculating those benefits.

The views of the Estonian TSO (Elering AS) to the CBA:

The Estonian TSO states in its consultation response to project promoter on 28 April 2016 comments to the CBA methodology and assumptions, which are referred in the following:

1. Elering AS is supportive to any new development in the regional gas market, which improves the situation with supply sources, competition, market development or security of supply. Paldiski LNG terminal has potential to improve them all. However, Estonian TSO considers new LNG terminal or storage projects as commercial projects, which should not be supported from TSO tariff. Elering AS considers the Estonian and regional security of supply level sufficient (with realisation of planned infrastructure projects Balticconnector, Estonia-Latvia Enhancement and GIPL) not to justify additional SoS investments socialised in TSO tariff. Still, Elering AS is responsible for holding the gas reserve for protected customers, provider of which is chosen in a competitive procurement procedure and is open to all qualifying providers.
2. The analysis assumes that LNG price is on average cheaper than pipeline gas starting from 2026. While this could be the case, Elering does not see it as the most likely scenario. It is relatively likely, that the third countries import will be cheaper in long run, as the exporter has motivation to preserve volumes and reduce export prices. Based on the research done by Frontier Economics "Baltic regional gas market study" from April 2016, the times of LNG being cheaper than pipe gas are most likely periodical in nature.
3. As majority of the benefits are commercial in nature (saved cost of gas, fuel and CO<sub>2</sub> avoidance), the project promoter should be in position to collect at least part of these benefits as revenues. As named commercial benefits are larger than the costs of project, the need for external funding is not clear.
4. A major input to the CBA benefit calculations is the market size available for the project estimated for the different LNG markets. With no information regarding the market sizes, it is not possible to assess the plausibility of the connected benefits.
5. The security of supply benefit for Estonia is plausible, while the probability of disruption may be overestimated as introduction of Balticconnector and Estonia-Latvia Enhancement considerably improves Estonian SoS.
6. The CBA includes some factual inaccuracies.

Taking into account Estonian TSO's consultation results, project promoter explains and has made following adjustments in the CBA:

1. The project promoter would like to take notice that the possible CBCA decision, where Estonian TSO would recommend not to distribute costs to TSO's tariffs, is also one of the project promoter's recommendations.
2. In calculating LNG price the project promoter uses Henry Hub prices as the base for the calculation with prices quoted in energy units. The future price for LNG in Henry Hub as well as oil prices are taken from the latest EIA forecast. The LNG conversation costs and transportation costs are indications by several different LNG traders and evaluated as being on the higher end in order to be conservative. When calculating the possible grid gas price, the project promoter has used the formula which is offered to a large scale gas consumer in Estonia. We agree that the possible introduction of cheaper LNG would have an impact on the current majority supplier of grid gas. In either case the social benefits would increase due to the new LNG source offering competition and therefore the benefits are still there.
3. The project promoter takes note that the possible impact of saved cost of gas might be larger, as it will impact whole consumption, not only the directly impacted grid gas consumers. The project promoter has indicated the potential upside as an additional benefit.
4. In regards to the comments received to calculations of benefits to the security of supply, the project promoter has corrected the value of the reduction of the probability of supply disruption.
5. Some factual inaccuracies, which were brought out, have been corrected.

The concerned NRAs' assessment of volume scenarios used in the CBA:

The project promoter has used ENTSOG Green and Grey scenarios. The concerned NRAs consider that the project-specific CBA should use the ENTSOG assumptions used in the PCI selection as these have been commonly discussed but also to avoid possible incentive to distort the project benefits during the process from PCI selection to cost-allocation..

The concerned NRAs' assessment of assumptions in the calculation of monetised benefits:

The project promoter has analysed gas price differences in their assessment of **saved cost of gas** benefit for grid consumers. The concerned NRAs note that the benefits are demanding to quantify due to significant uncertainties in the market developments but consider that the assumptions made by the project promoter in calculating this benefit are reasonable while particularly linked to the used volume scenarios and price estimates.

The project promoter has analysed gas price differences in their assessment of **saved cost of fuel** benefit for off-grid consumers. The concerned NRAs note that the benefits are demanding to quantify due to significant uncertainties in the market developments but consider that the assumptions made by the project promoter in calculating this benefit reasonably captures the possible off-grid benefits while noting that the realisation of this benefit is not needed for positive net impact.

The project promoter has presented that the **security of supply** benefit is represented by the value of the avoided demand disruption due to the existence of Paldiski LNG terminal (for Estonia and Finland). The project promoter has assessed the benefit through GDP and the share of natural gas in the energy mix while considering that some of the gas consumers have the

access to the alternative fuel stocks. The concerned NRAs note that the benefits are demanding to quantify due to significant uncertainties in the market developments but consider that the assumptions presented by the project promoter in calculating the security of supply benefit reflect the ENTSOG assumptions and scenarios and thus, are reasonable.

The concerned NRAs find that the **residual value** benefit is presented in accordance with ACER Recommendation.

The project promoter has presented that the **CO<sub>2</sub> cost savings** benefit is calculated where the assumed fuel switching for off-grid consumers caused by the project directly impacts the sustainability of the impacted countries by reducing the CO<sub>2</sub> emissions, as the emission level from natural gas is lower than from liquid fuels currently used by the off-grid consumers. The concerned NRAs consider that assumptions presented by the project promoter in calculating the CO<sub>2</sub> cost savings benefit is reasonable.

Considering the above, **the concerned NRAs find that the project promoter's assumptions and calculations of economic benefits in the CBA are appropriate and present the projects' possible net impacts to relevant member states.**

## **2.6 Assessment of the business plan and financing strategy**

The aim of the project is to build and operate the East Baltic Sea regional LNG import and regasification terminal. The project location is on the south coast of the Gulf of Finland, in Estonia. The port location on the north-eastern side of the Pakri peninsula has been chosen for its favourable ice conditions, easy navigational path, low impact on the environment and a large available safety radius. Since the project is planned on the Balticconnector land-fall, connectivity to grid is relatively inexpensive.

Balti Gaas OÜ intends to build a Baltic regional terminal with 160 000 m<sup>3</sup> storage tank capacity to be commissioned in the summer of 2021 in order to provide an alternative supply option for the Baltics, which is currently highly dependent on Russian gas imports. This solution allows for a terminal to be ready for the Baltic States at the earliest possible. The terminal would be large enough to assist with supply to the Finnish market through Balticconnector if necessary.

The terminal is designed to service both gas grid customers and off-grid customers, since pursuant to market analysis it is clear that the off-grid market will prove instrumental in this region.

CAPEX financing structure of the project promoter includes equity (18%), commercial debt financing (42%) and grant funding (40%).

The concerned NRA notes that business plan calculation is carried out in line with the current regulatory framework and the methodology makes appropriate assumptions. However, the project promoter's grant funding expectations might be unrealistic to alternative gas supply project.

## **2.7 Financial assessment**

The project promoter has presented separately calculated financial performance indicators for Estonia and Finland with several assumptions.

The concerned NRA notes that financial performance calculation is carried out in line with the current regulatory framework and the methodology makes appropriate assumptions. However, the analysis submitted by the project promoter is dependent on many assumptions for example average annual capacity bookings and tariffs.

## **2.8 Impact on Network Tariffs**

The concerned NRAs agree with Finnish and Estonian TSOs' position that considering Paldiski LNG terminal as commercial project, it should not be supported from the TSO tariffs. That is also in line with the project promoter's CBCA conclusions.

## **2.9 Regional and EU-Wide Positive Externalities of the Project**

The project generates positive externalities in terms of enhancement of competition and market integration, security of gas supply and sustainability in the Finnish-Baltic region, and contributes to the European energy policy goals.

## **2.10 Cross-border cost allocation**

The project promoter has proposed a CBCA as followed:

1. The net benefit to each country is positive and therefore there is no need for Cross Border Cost Allocation from the significantly impacted countries to the host country as per ACER recommendation.
2. The European Commission has repeatedly emphasized the importance of the significantly impacted Member States to take a stake in the project in order to warrant any EU funding. The form of such a stake has not been specified and the project promoter thus believes that if the State expresses commitment to the SoS booking at the terminal, this would be regarded as a form of funding of the project by the Member State concerned.
3. As per the Memorandum of Understanding co-signed by the Ministry of Economics and Communications of Estonia, the Estonian government reserved a right to become an equity holder of the project. The project promoter is still happy to welcome the Estonian Government to make the equity investment as a financial stake in the project. Also any investments by the Finnish government are greeted. Since no SoS booking is intended for Latvia in the terminal, no contribution is expected from Latvia.

The concerned NRAs declare that the project promoter's CBCA proposals alternatives 2 and 3 outward Regulation (EU) no 347/2013 limits and cannot be considered in current decision.



**COMPETITION AUTHORITY (ESTONIA) AND ENERGY AUTHORITY (FINLAND)  
HAVE AGREED TO ADOPT THE FOLLOWING IN THEIR NATIONAL  
DECISIONS:**

*Article 1*

As the net benefit to each country is positive, therefore there is no need for Cross Border Cost Allocation from the significantly impacted countries to the host country.

*Article 2*

As there are no investment costs borne by the TSOs, no investment costs shall be taken into account from Paldiski LNG terminal project in the regulatory asset base when network tariffs are fixed or approved.

*Article 3*

This cross-border cost allocation agreement is addressed to the following project promoter:

Promoter	Country	Contact details
Balti Gaas OÜ	Estonia	Address: Roseni 13, Tallinn 10111, Estonia Phone: +372 6617 731 E-mail: <a href="mailto:info@baltigaas.ee">info@baltigaas.ee</a>

28<sup>th</sup> October 2016



Märt Ots  
Director General  
Competition Authority



Simo Nurmi  
Director General  
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